CLAIMS

What is claimed is:

1. A device for generating a quadrangular illuminating field, having a light mixing rod, which has a quadrangular cross-section as well as a quadrangular inlet area and a quadrangular outlet area, and guides light coupled in via the inlet area to the outlet area, in order to generate therein the quadrangular illuminating field, said outlet area being limited by four rectilinear sides, of which two each meet in one of the corners of the outlet area, wherein the sides meeting in one corner each converge at an angle which is not equal to 90°.

2. The device as claimed in Claim 1, wherein the sides converge at an angle of different size in each corner.

3. The device as claimed in Claim 1, wherein the light mixing rod is formed such that each of its cross-sectional areas is limited by four rectilinear sides, which converge at the same angles as the sides of the outlet area.

4.The device as claimed in Claim 1, wherein the cross-sectional area of the light mixing rod decreases from the inlet area toward the outlet area.

5.The device as claimed in Claim 1, wherein the light mixing rod is a solid mixing rod made of a light-transparent material.

6.The device as claimed in Claim 1, wherein the light mixing rod has a hollow cross-section, which is formed by four reflective surfaces extending from its inlet area to its outlet area.

7.The device as claimed in Claim 1, wherein the light mixing rod comprises first and second light guiding regions for separately guiding components of the coupled-in light due to a partition extending from the inlet area toward the outlet area.

8.The use of a device for generating a quadrangular illuminating field as claimed in Claim 1 in an optical device comprising a surface to be illuminated, which has a predetermined shape, and illumination optics, which form an image of the outlet area on the surface to be illuminated.

9.The use as claimed in Claim 8, wherein the optical device further comprises projection optics for projecting the surface to be illuminated onto a projection surface.